REMARKS

Claims 1-4, 6-22, 24, and 26-38 are pending in this application. Claims 3, 6, 22 and 25 are currently amended, claims 4, 8-10, 16-21 and 24 are canceled, and claims 39-42 are new claims. Claims 20 and 27 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Claims 3 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claims 11, 12, 15, 16 and 18-21 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,649,200 ("Leblang"). Claims 22, 24 and 26-29 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,903,897 ("Carrier"). Claims 31-38 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,223,343 ("Hopwood"). Claims 1-2 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hopwood in view of Leblang. Claims 3-4 and 6-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,481,722 ("Skinner") in view of Panagiotis, *Diff Man Page/Man-cgi*, 1.11, 1994 ("Panagiotis"). Claim 17 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Leblang. Claims 13 and 14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Leblang in view of U.S. Patent No. 5,649,200 ("Howard"). Claim 30 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Carrier. Applicants respectfully request reconsideration of the present application in light of the above recited amendments and below recited remarks.

The Claimed Invention

The present invention discloses systems and methods for managing code changes for software development. More specifically it is disclosed that:

> "[a]n aspect of the invention provides better ergonomics and increased speed in merging versioned documents by indicating differences between them at multiple different subdivisions or levels, such as line and character levels.
>
> Another aspect of the invention increases the reliability of merges between documents by comparing them not only for incompatible changes with respect to each other, but also by detecting possible alternative histories from a common parent document, and flagging these as potential conflicts.

Another aspect increases flexibility in reverting to previous versions by removing changes made during an earlier version to be backed out from a current version while retaining changes made in a version later than the removed version but earlier than the current version.

A further aspect of the invention increases the ability to integrate all the material pertaining to a change, by keeping it together in one place. This aspect associates both versioned and nonversioned documents for the same version together, so that they can be manipulated as a single unit.

Yet a further aspect permits developers to work in together in constructing a new build of the software even while another build is being tested and patched. Multiple copies of the documents are made in different areas. While one set of copies is built and tested, private copies for each builder have previous changes removed, so that they can modify clean copies of the documents (Application, Summary of the Invention)."

Rejections Under 35 U.S.C. § 101

Claims 20 and 27 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Specifically, Claims 20 and 27 allegedly is directed to a mere abstract idea, does not depict interaction between structural elements, and does not lead to a concrete, tangible, and useful result. Applicants respectfully traverse.

Applicants note that claim 20 is canceled by the present amendment. Applicants further note that claim 27 recites that both the plurality of entries and the single entry function to identify a plurality of versioned documents and a nonversioned document, respectively, thereby explicitly reciting functions of the entries. Also, claim 27 recites that the nonversioned document pertains to at least one of the versioned documents, thereby reciting an interrelationship between those elements. Further, claim 27 recites that:

> "the nonversioned document providing information useful to the development of the software application"

> "the association file assisting in the development of the software application by associating the versioned documents and the nonversioned document in a single file."

Thus, claim 27 explicitly recites a number of concrete, tangible, and useful results.

Rejections Under 35 U.S.C. § 112

Claims 3 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Claim 3 has been amended to more clearly state the claimed subject matter. Claim 8 has been canceled.

Rejections Under 35 U.S.C. § 102

1.   Claims 11, 12, 15, 16 and 18-21 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,649,200 ("Leblang"). Applicants respectfully traverse.

Leblang discloses a dynamic rule-based version control system. Derived objects may be stored in a public VOB area or a private view corresponding to particular users. All objects in the private view are initially read only objects, but, if the users wish to edit the objects, then the objects may be "checked out". Upon completion of the editing, the objects may be "checked in". Each derived object may have a corresponding configuration record that contains an audit of the build process used to create the object (Leblang, Summary of the Invention).

With respect to claim 11, Leblang does not teach or suggest features recited in the claim, namely:

> "comparing both child documents with an identical version of the common parent document and *indicating any possible conflicts between the child documents for portions of the child documents that are the same as each other*;
> producing a merged output document indicating both the actual and the *possible* conflicts."

In the Office Action, the Examiner states that, in Figs. 13 and 16 of Leblang, "X being at the root of the tree reads on a common parent to child documents in the process for detecting possible conflicts or delta." (See Office Action, Page 4). However, nowhere does the Examiner cite where this alleged "process for detecting possible conflicts" is described or even mentioned in Leblang. Figs. 13 and 16 do not in any way teach or suggest *indicating possible conflicts* between the children. In fact, Figs. 13 and 16 do not depict conflict detection schemes at all. Rather, Figs. 13 and 16 merely depict exemplary versioning schemes. Figs. 13 and 16 merely show a tree with a root "X" and a number of changes (delta

A, delta B etc.) that can be added to and then later subtracted from the root. Nowhere in Figs. 13 and 16 or their corresponding descriptions there is any mention of detecting and indicating conflicts, and, more specifically, of detecting and indicating possible conflicts.

Applicants respectfully submit that dependent claims 12 and 15 are patentable at least by reason of their dependency. Claims 16 and 18-21 are cancelled by the present amendment.

2.   Claims 22, 24 and 26-29 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,903,897 ("Carrier"). Applicants respectfully traverse.

Carrier discloses a software documentation release control system. A source module is attached to a corresponding release form primarily by engineers or developers. The release form is then assigned to a build. Documentation about the build such as, for example, a build log and a build report are stored in a project file directory (Carrier, Summary of the Invention).

With respect to independent claim 22, Carrier does not teach or suggest features recited in the claim, namely "associating additional, non-versioned documents into the same change set by listing them in the same association file as the versioned documents." Similarly, with respect to claim 27, Carrier does not teach or suggest an association file with "at least one entry functioning to designate a nonversioned document." The Examiner analogizes the "association file" of claims 22 and 27 with the "release from" of Carrier. However, Carrier does not teach or suggest that a release form lists any nonversioned documents. Rather, Carrier discloses that a release from includes only attached source modules (which are only versioned documents) (Carrier, Col. 6, ll. 17-18).

Applicants respectfully submit that dependent claims 26, 28 and 29 are patentable at least by reason of their dependency. Claim 24 is cancelled by the present amendment.

3.   Claims 31-38 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,223,343 ("Hopwood"). Applicants respectfully traverse.

Hopwood discloses a computer system and method to track and control element changes throughout application development. A revision management system includes an inventory group manager (IGM), a work group manager (WGM), and a version manager (VM). The IGM generates and manages one or more lists for each of one or more elements logically related to each other as one or more inventory groups. The IGM also maintains and manages the lists of the elements in the inventory group and provides new elements to be added to the inventory group. The WGM selects the elements relating to a project that require modification. and selects elements from the inventory groups to form a project work group. The VM tracks and manages the modifications to the elements in the project work group, and generates reports with respect to the modifications responsive to user selectable criteria (Hopwood, Summary of the Invention).

With respect to independent claim 31, Hopwood does not teach or suggest features recited in the claim, namely "removing the build-specific changes from the enlistment files." The Examiner analogizes the storing of a master copy of a file to removing build specific changes. However, simply keeping a master copy of a file does not in any way teach or suggest the removal of build specific changes. In fact, there is nothing inherent to a master copy of a file which would even identify which changes are build specific and which are not. To identify which changes to a file are "build specific" one would have to look at all the master copies of all the files in the build and identify which of the changes in each of the master copies are consistent across all of the files in the build – which would likely be a long and tedious process.

Applicants respectfully submit that dependent claims 32-38 are patentable at least by reason of their dependency. Accordingly, reconsideration and withdrawal of the 35 U.S.C. § 102 rejections are respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

1. Claims 1-2 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hopwood in view of Leblang. Applicants respectfully traverse.

With respect to independent claim 1, the Examiner cites Leblang (Figs. 13 and 16) as suggesting, "comparing the multiple ones of the versioned documents to a common parent

document and *indicating possible conflicts* therebetween caused by alternative histories from the parent document." However, as discussed above with reference to claim 11, neither Figs. 13 and 16 nor any other portion of Leblang in any way teach or suggest *indicating possible conflicts* between children. In fact, Figs. 13 and 16 do not depict conflict detection schemes at all. Rather, Figs. 13 and 16 merely depict exemplary versioning schemes. Figs. 13 and 16 merely show a tree with a root "X" and a number of changes (delta A, delta B etc.) that can be added to and then later subtracted from the root. Nowhere in Figs. 13 and 16 or their corresponding descriptions there is any mention of detecting and indicating conflicts, and, more specifically, of detecting and indicating possible conflicts.

Also, the Examiner cites Hopwood as teaching, "removing the build-specific changes." However, as discussed above with reference to claim 31, Hopwood does not teach or suggest this feature. Rather, Hopwood merely discloses storing of a master copy of a file. However, as discussed above with reference to claim 31, simply keeping a master copy of a file does not in any way teach or suggest the removal of build specific changes.

Applicants respectfully submit that dependent claim 2 is patentable at least by reason of its dependency.

2.   Claims 3-4 and 6-10 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Skinner in view of Panagiotis. Applicants respectfully traverse.

Skinner discloses a method and apparatus for merging change control delta structure files of a source module from a parent and a child development environment. Change deltas are created and propagated among the environments without any loss in change history (Skinner, Summary of the Invention).

With respect to independent claim 3, Neither Skinner or Panagiotis teach or suggest features recited in the claim, namely: "determining whether there are more than a pre-determined number of differences between the lines; and, if so, then indicating the differences." Rather, Skinner discloses an output delta table is produced regardless of the number of differences between lines (Skinner, col. 8, ll. 16-25; Fig. 5). Similarly, new independent claim 39 recites this determining step and is patentable for the same reasons.

Applicants respectfully submit that dependent claims 6, 7, and 40-42 are patentable at least by reason of their dependency. Claim 4 is canceled by the present amendment.

3.   Claim 17 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Leblang. Claim 17 is canceled by the present amendment.

4.   Claims 13 and 14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Leblang in view of U.S. Patent No. 5,649,200 ("Howard"). Applicants respectfully traverse. Applicants respectfully submit that claims 13 and 14 are dependent from independent claim 11 and are therefore patentable for the same reasons.

5.   Claim 30 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Carrier. Applicants respectfully submit that claim 30 is dependent from independent claim 27 and is therefore patentable for the same reasons. Accordingly, reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejections are respectfully requested.

CONCLUSION

In view of the above remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application is respectfully requested.

Date: <u>February 22, 2005</u>
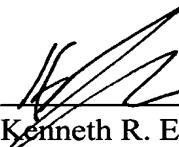
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